

MOONEY, John A.

HOW THE BLIND SEE.



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As we pass a busy street-corner a timid man, with outstretched hand or rusty tin cup, modestly appeals to us to "help the blind." A few blocks further on we meet another who, the more surely to attract our attention, has lifted upon his shoulder a trembling dog whose smothered whine tells of his longing for a firmer foot-hold. Just opposite a third sightless man is vigorously scratching three rasping fiddle-strings or pulling and squeezing painful squeaks and groans out of a wheezy concertina. The musician and the sad-faced man with the dog are mute. On their breast, however, hangs a painted cry to "Help the Blind." The help these poor men seek is that of a cent or a nickel. If we do not always give them one or the other it is either because we have become used to the appeal or because we have doubts as to the actual blindness of him who so deferentially asks our alms, or because our sympathies are so large that a small coin would not adequately express them.

The street appeal for help might lead one to think that the blind are necessarily helpless. Yet they are not. This or that blind man may be ill, or burdened with years and an empty pocket, and thus need charitable aid; or he may be untrained, without any trade, and then indeed dependent on society. Should this be the case society must bear the blame, for the blind man, if he have no other radical infirmity, can earn his own living. He has intelligence, four senses at least, the command of his limbs, and ambition. Give him the chance and he will show you that he was not created solely to be a beggar, and that he values as much as you do independence gained by intelligent labor. His powers are greater than you give him credit for. The help he wants is a fitting education, and that society owes him and itself.

It is more than likely that the poor fellows we just passed were brought up in the old fashion; for only recently have civilized communities come to look upon the blind as fitted for better things than butts or beggars. How the ancients dealt with them we do not know; but where men with eyes were not counted as of great price, it is probable that eyeless men were killed with a weapon more material than kindness. Though the law of charity insured them a livelihood in Christian times, there is no record of any systematic attempt to serve the blind until, in the year 1260, Saint Louis established the Hospital of the *Quinze Vingts*,

or Three Hundred, in Paris. There he housed that number, not of blind Crusaders, as you will read in the books, but of poor blind Parisians, giving them a chapel and providing for their religious instruction; and that they might be above want if they would, he gave them the sole right of gathering alms at the doors of the larger churches. The good king's example was quickly followed in other countries, and many were the confraternities of the blind founded through public or private charity. As so often happens when a new way to do good is discovered, too many rushed in to "help the blind." The confraternities grew fat, fought with each other for bequests and perquisites, and in time drew upon themselves ill-will and neglect. Where there were no confraternities the blind had to beg or play the fool. They chased pigs or were innocently led into stick-fights with other blind men who were as innocent as themselves, or were marched about in ridiculous processions—all for the amusement of the tender-hearted townsman or the simple, joyous rustic. Only late in the last century was any serious thought given to their unfortunate condition, or any intelligent effort made to deal with them as though they were intelligent beings.

Why were the blind so long neglected? Doubtless on account of a widespread notion that the eye played a more important part in our education than it does in fact. Ask a number of your acquaintances whether, if they were forced to choose, they would be made blind or deaf-mutes. The majority will declare that they value their sight more than hearing or speech; and yet Louis Vidal, the blind sculptor, claims that all a man's eyes are good for is to keep him from running into a wheelbarrow. A moment's reflection will convince us that the greater part of our knowledge comes to us by hearing and touch, not by vision. Our experience of form is an experience of touch rather than of sight. To the child neither outline nor shadow convey a definite idea of real form. He learns to distinguish round from square and hollow from solid by touch; and with the aid of the same sense the blind man gains a definite idea of form and therefore of mass. The eye is of little use in measuring distance or height. If it were the Great American Showman would be compelled to cut off at least one foot from the Russian giant and the performer on the trapeze would wholly take away our breath.

Sight helps to limit the other senses. We are so busy seeing what we can see without studied effort that we neither taste nor smell nor feel as we might if we were blind. The blind man having no sights to distract him cultivates to a high degree the

senses he has; and circumstances aid him by compelling him to train himself in many ways that to us seem useless because we have eyes. Many of our actions are quite independent of our sight. They are purely mechanical, automatic in a sense. Such are walking, running, climbing, eating. There is no reason why the blind man should not perform any of these actions with as much freedom and certainty as we do. Indeed, if you enter an asylum you will see the blind children racing along the halls and running up and down stairs at a speed not surpassed by a youngster with the best of eyes. The famous English politician, Fawcett, postmaster-general under Mr. Gladstone, was blind. Still he rode horseback. Nor is he the only blind man who enjoyed a canter. Campbell, an American, a blind man who devoted himself to the instruction of the blind, not only made a habit of riding but did what few seeing men care to do—walked up Mont Blanc, where no doubt he saw as much as some far-sighted men who have made the same journey. If a blind man knows a room he will find not only the door but the knob with little if any hesitation. He can tell you the green from the red chair; he has felt the stuffs and the chair-backs. The blind woman cannot see the needle's eye, but she can thread a needle as quickly as you can—with her tongue and lips. She can knit the finest lace; the intricacy of the pattern will not trouble her.

Every one can understand that a blind man's hearing will be acute. As a guide his ears serve him quite as much as his stick. His trained ear detects and analyzes every sound, however faint. Hence it is that he so delights in music. No one wholly enjoys a great work, be it a Mass, or symphony, or concerto, or an aria, with his eyes open—unless Nature put cotton in his ears. Not only does the blind man appreciate the beauties and refinements of sound, but he readily learns the science and art of music. The want of eyes does not lessen the æsthetic faculty. He is as sensitive to the beauty of words, ideas, imagery as of sounds. By himself he cannot enjoy a painting or an engraving or a photograph, but he may delight his soul to the full with things carved, or sculptured, or modelled, or stamped—a binding, a coin, a vase, a statue, a gem, or vessel, or panel. Blind Nicholas Saunderson not only admired and collected Grecian coins, but he was so expert that he could feel a false coin from a true. If all the collectors who have eyes were as expert, failures would be more frequent in the coin business. Giovanni Gonelli—the blind man of Gambassi—who died in 1775, not only appreciated sculptured things, but was himself a

sculptor. He was studying his art when, at the age of twenty, he lost his sight. Loving beautiful form he tried to realize it, though he could no longer see it. A marble statue of Cosmo I. came in his way. He admired it, and feeling it carefully, patiently, he made a copy of it in plaster. Ferdinand of Tuscany was so pleased with the work that he sent Gonelli to Rome to continue his studies. There he made a famous plaster statue of Urban VIII., and gained a reputation by his successful portrait busts. He also modelled many good terra-cottas. If any fortunate pilgrim to Florence, as he leaves the Pitti Palace or the Uffizi, will turn into the Via Porta Santa Maria, just opposite the Ponte Vecchio, a few steps will bring him to the church of San Stefano. There he may see four statues by the blind man of Gambassi.

In our own day we have a blind sculptor who has made a reputation—Louis Vidal, the man who spoke so slightly of the eyes we value so much. Vidal was born at Nimes, in 1831. He studied under the famous Barye and under Rouillard. In 1861 he took a medal of the third class. He is a sculptor of animals, and the variety of his work shows that he has studied well without eyes. One of his works, a panther in bronze, is at the Orleans Museum. The Museum of Nimes owns another bronze, a bull. A gazelle that he modelled in wax belongs to Baroness Rothschild. Looking over the list of works you will see the wide range of his studies—a lion, a tiger, a stag, an English horse, English cob, African gazelle, a Java tiger, cow and calf, and dogs and goats. Should we ever have a blind sculptor—and let us hope we may—if he be a man of quick sensibility, it will not be safe to let him feel our great works of art. Imagine him as he fondled the Brunelleschi dome of our Walter Scott in the Park, or the noble draperies of our William H. Seward, or the twice-martyred Abraham Lincoln, or that loveliest, dearest, *pas-seul* “Angel of Bethesda”! Let us pray that our blind sculptor be not a passionate man—unless he carry a sledge-hammer with him!

The beginnings of all things are misty, uncertain. The story is that Valentin Hauy, a Frenchman, was the first man to undertake the systematic education of the blind. And yet it is certain that there were educated blind men long before Hauy. Peter Pontanus, a Fleming famed in his day, lost his eyesight at three years of age. He made himself a learned man, by what methods I cannot say. His own country was not big enough for him; so he went to Paris in 1500 and there opened a school

and taught the belles-lettres. He published works on poetry, grammar, and rhetoric. How did he learn to read and write? Then there was Gian Paolo Lomazzo, the Milanese painter and poet, philosopher, astrologer, and mathematician. He became blind at the age of thirty-three. When he died in 1592 he was fifty-four years old. It was a dozen years after his misfortune that he published the *Treatise on Painting*. Two years before his death the *Idea of the Temple of Painting* appeared. Lomazzo's works are of value to-day, and are helpful to the history of art and the study of the practice of the masters. How did Lomazzo continue his studies after he had lost his sight? To pass over many other educated blind persons, there was Mademoiselle Paradis, a Viennese woman and a contemporary of Hauy. She was an accomplished musician who read music by a system of notation devised by herself. In geography she was especially well versed. A blind man taught her—Weissenburg, a German, who first conceived the idea of making maps in relief. Who taught Weissenburg what he knew?

Here we are back again to Valentin Hauy! Valentin was the brother of the more famous Abbé René Just Hauy, the founder of the science of crystallography. It was in 1771 that the Abbé de l'Epée made up his mind to devote his life and fortune to the education of the deaf and dumb. Valentin Hauy became interested in De l'Epée's work. One night he went into a Parisian *café chantant*, and there he found the crowd amusing itself by guying a troupe of blind singers who had been gathered in from the highway, in order that their rough voices and odd grimaces might make them ridiculous. Hauy's heart was touched. In pain he left the house, and then and there he resolved that he would help the blind. He was acquainted with Mademoiselle Paradis, who lived in Paris at the time. She read music, you remember. How did she manage it? By an arrangement of pins in the form of letters. Did this suggest anything to Hauy? No one knows. All we know is that he set to work, thought out a method of instruction, and then sought a subject to practise on. By profession a teacher of languages, Hauy had experience as well as good will. At one of the Paris churches he had noticed a blind beggar of more than ordinary wits. This boy, named Lesueur, he took home with him, and the new system had its first test. It was a success.

What a happy day that was, not only for Hauy and little Lesueur, but for all the unborn blind! The day is not far back—just one hundred and four years ago. Hauy gained patrons

and opened the "Institution for Blind Youth," which still exists. Within a few years he had a trained band of singers and musicians. Twice Louis XVI. listened to the blind chorus and orchestra at Versailles and the Tuileries. Then came the days of Liberty and Equality and Fraternity, and the guillotine, and, worse than all, *assignats*. The state had assumed the guardianship of the institute; but the blind boys and girls fared none the better. *Assignats* make better fuel than food. The institute closed, and poor Hauy was as homeless as his pupils. He went to St. Petersburg, and there founded a similar institute in 1806, and later on he helped to found still another at Berlin. In 1817, broken in health and almost destitute, he returned to France, where he died in 1822. Hauy's good work had immediate results. In 1791 an institute was established in Liverpool. In point of time this one ranks second to the Paris house. To trace the history of the various foundations would not help our purpose. All that we need to know is that there are to-day in every country of Europe, and in America, asylums where the blind are taught, and taught well.

The first requisite of a method for teaching the blind by way of books is, of course, an alphabet, or, rather, a type. As the blind man sees with his fingers, you must give him a type that he can feel. This was plain to Hauy, so he set about printing books with raised letters. He used the type known as script. If you will look at this word *Script*, which is printed in "script," and then picture it to yourself in relief, you will see that Hauy's pupils had no easy time learning their alphabet. And how about the musicians? For he also invented a system of raised musical notation. Imagine yourself trying to feel all the ins and outs of a page of a primer, or a spelling-book, or a catechism, or even a good novel—printed in raised script! However difficult it was to learn by means of Hauy's type, the blind did learn in that way, and indeed many learn to-day by methods quite as primitive. Up to 1830 there was no great advance in the methods of printing. Some books were printed in ROMAN CAPITALS. The letters being larger than Hauy's presented more surface to the finger, but the curves were bothersome, and it took a deal of time to travel over a word. In 1834, Gall, of Edinburgh, made a serviceable change in the form of the Roman capitals, replacing the curves by angular lines. A German, whose name escapes me, but who was long connected with the Philadelphia institution, adopted a system of capitals and small letters in combination. Lucas and Frere in England in-

troduced an alphabet made up of Roman letters and a kind of shorthand. In Germany they adopted and still use Roman capitals, formed not of lines but of small dots. A book printed in any of these raised types is agreeable to look at—much more agreeable than our black-and-white page—but any one can see that a blind man's learning will be rather limited as long as he is dependent on such expensive and voluminous works. A few lines of this page of *THE CATHOLIC WORLD*, printed in raised Roman capitals, would fill the page; and this number of *THE CATHOLIC WORLD* printed in blind-man's type would be as thick as a volume of an encyclopædia. If these clumsy and costly types are still in use in England, Germany, Italy, and America, it is only because it is hard to change whatever has been once fixed.

As it was a Frenchman who made the first type for the blind, so it was a Frenchman who made the first blind-man's type. Louis Braille was born in 1809. His father was a harness-maker, and Louis began to help him when only three years old. In his tenth year he injured his eye with an awl and became blind. He was sent to the Paris Institute, where he studied music and became a skilful performer on the piano, cello, and organ. In 1827, after having held the place of organist in several Paris churches, he became a professor in the house where he had been a pupil. There he taught until 1852, when he died. We would not be blind—but a man may do more good without eyes than with them. Braille at the harness-maker's bench could never have done what the blind Braille did. He saw the defects of the alphabets in use, and set about devising a new one. He succeeded. Then he applied his new method to the system of musical notation; and, last of all, he perfected a system of writing. Before Braille a blind man might learn to read, but he could not easily correspond with his friends, or take notes, or compose. A friend, Foucault, improved Braille's system, and together they perfected what is known as the Braille-Foucault system. How did Braille go to work? He cut clear of our types, and made a new written language whose signs were raised dots. By varying combinations of six dots he expressed all the sounds represented by our alphabet. Every letter had an equal space. The letters followed each other from left to right, as ours do. But the dots which represented a letter were arranged in longitudinal spaces of uniform length. At most there were two columns of dots to a letter, and yet the blind man had to go slow. He could not be sure of a letter until he had felt over a whole

space, up and down, for there might or might not be a dot at the bottom of the column.

Braille's dotted language was far ahead of the scripts, Roman capitals, and other types in use. It was not perfect, but it was a great help to the blind. They learned to read in less time than by the old methods. And as the new alphabet was more compact, and more easily printed, books for the blind grew in number and diminished in size. The saving was at least one-third. Having aided the blind man in reading, Braille now taught him to write. Here is a sheet of paper. On it he puts a brass plate, cut up into regular spaces. With a point made of bone or metal or wood he presses on the paper, indenting each space with the dots which represent this or that letter. He works from right to left. When his correspondent receives the letter he reads it from the reverse side. There the dots are all raised, and he feels out the letters from left to right. Braille's method was adopted in France, but notwithstanding its evident advantages it made little progress elsewhere.

During the last sixty years Americans have shown great interest in the education of the blind. To-day we lead the world in attending to their instruction. New York has not been behind-hand ever since Dr. Akerly first took up the work in 1831. To a New-Yorker, Mr. William B. Wait, Superintendent of the New York Institution for the Blind, we owe a new system of printing, writing, and musical notation, which corrects the defects of Braille's system and still further simplifies the education of the blind. Mr. Wait's language, like Braille's, is a language of raised dots. Braille's dots were arranged in longitudinal spaces; Mr. Wait's are combined in horizontal spaces. In Braille's language there were as many as six dots to a sign. In Mr. Wait's five is the limit for the small letters, and among the capitals there are only three signs of six dots—H, X, and Z. Mr. Wait's system is in every way simpler than Braille's. The signs are more compact; the distinction between the capital and small letters is simple—the addition of a single dot—and the reader can feel all the dots of a letter simultaneously. Many teachers maintained and still hold that the blind person can only receive by touch a single impression at a time. Just as if some one should claim that we saw but one letter at a time. Mr. Wait's experience taught him that the blind man can mentally combine a number of distinct impressions into a whole instantaneously. His alphabet has determined this fact.

But Mr. Wait's system is especially simple by reason of an

ingenious adaptation of his alphabet to certain well-known peculiarities of our language. You have seen a printer's "case." Some of the boxes are filled with types; in others they are comparatively few. If you will look over the case you will find that the printer has more "e" and "t" types than any other. Why so? He has found by experience that these are the two letters he is oftenest called upon to "set up." After e and t come a, i, n, o, and s; then c, d, f, l, m, p, r, u, v, w, and y; then b, g, j, k, and q, and, last of all, h, x, and z. To the letters most frequently met with I shall give the simplest sign, said Mr. Wait, and so "e" and "t" are each represented by one dot, the batch beginning with "a" by two dots; the next batch by three dots, the next by four, and the last by five. You see how much the blind man has gained. Mr. Wait's method of writing is like Braille's. He uses a wire point and brass tablet; but the divisions are spaced horizontally to suit Mr. Wait's alphabet. The blind man may punctuate if he will. Mr. Wait has supplied him with signs. In 1872, with the assistance of Miss Babcock, a teacher of the blind, Mr. Wait brought out a simple, practical system of tangible musical notation. It is a thoughtful, thorough, ingenious piece of work. Take a look at it. You will be interested whether you are a musician or not. Thanks to Mr. Wait, the blind man may to-day study harmony and the science of music with much less labor than of old.

A child born blind should be educated in a special manner from birth. And so a child blinded at an early age should at once be put under the care of teachers skilled in training the blind. Experience shows that the bodily constitution of those born blind is relatively weak. Hence from the first moment of life they should be cared for, not as if they saw, but with intelligent consideration for their bodily weakness, their blindness, and their special mental and moral character. They are, in a sense, beings different from us. Their disposition, tendencies, traits of mind are necessarily qualified by the fact of their having only four senses. This special organization and character should be recognized promptly; otherwise the blind child is unfairly treated. It is pleasing to watch the child with eyes as he struggles to learn something of the world around him. But this pleasure is small compared with that to be gained from an experience of blind children who are *feeling* their way into life. Here are the youngsters. They have a lump of modelling clay before them, and, alongside, a number of children's toys—but carefully made toys—a chair, a table, a cooking-stove, a coal-scuttle, a vase, a

pitcher, a basin, a rabbit, a turtle, a crab. Watch the faces of the children as they feel the forms of this or that toy! They have it! See them transfer their impression to the clay! When they have done with the table or the pitcher or the rabbit the counterfeit would be quite as good as you could make.

Observe the two little girls who are modelling a stove. Their models are equally advanced. They are feeling the grate. Each has a finger running over the bars and down into the spaces. Their fingers meet, cross each other, race to the last bar, return; the face of the younger brightens with a smile of satisfaction, enjoyment; she sees it all, and something is won—something new. "Oh! isn't it perfectly lovely!" she exclaims to her little neighbor. Now she is pressing and shaping the clay, hastily, that she may prove to herself that she has learned a good many new facts. Go in among the big boys and girls; they will astonish you. They read fluently, and spell test words, and show no want of clearness of mind in defining. When you enter the arithmetic or the geography or the physics room you see how defective our education is, not only in the matter of touch and hearing, but, above all, in that of memory. A blind man's memory must be trained highly, and unquestionably it can be more variously and easily trained than ours. He has not to remember things seen. The blind man's powers of concentration and analysis are also greater than ours.

Have you ever heard a class of blind boys and girls stand an examination in mental arithmetic? They would make a bank book-keeper ashamed of himself. There have been blind men who made a name as mathematicians. There was that Nicholas Saunderson, the very one who was such a good judge of coins. He was born in 1682 and died at the age of fifty-seven. When a year old he took the smallpox, and came out of it blind. How he was educated I have been unable to learn, but in his twenty-ninth year he had so far distinguished himself as to be chosen to succeed Whiston as professor of mathematics at Cambridge. In 1728 the university conferred upon him the degree of LL.D. He was a close friend of Halley and of the great Newton. He published a *Method of Fluxions*, and left unpublished many valuable papers connected with his studies, as well as an unfinished scheme of a language for the blind. But, to come nearer home, we have a distinguished mathematician, a blind man, living and working among us. Mr. Louis B. Carll, of Columbia College, published several years ago a *Calculus of Variations* that has been made a text-book at Harvard as well as at Columbia. John

B. Herreshoff, the Bristol boat-builder, may not be as great a mathematician as Saunderson. Our fast steam-yachts prove, however, that Herreshoff can calculate nicely, and that his finger-tips are fairly sensitive. He has not seen, with his eyes, since he was fifteen.

Before strangers with eyes the blind, generally, are not themselves. This is especially true of the women. Unknown to the company you study a room-full. They are natural, unrestrained; but let your presence be known, and all freedom is gone. The blind cannot see each other, and, therefore, can be unreserved in each other's presence. But they are sensible that you can see each one of them. Therefore, each one's pride or vanity shows itself at once. They shift their limbs and expressions. The women nervously feel the folds of their dresses, the breast-pin, the watch-chain. They move the feet to the right, to the left, in, out; something may be amiss. When you study the facial expression of the blind it becomes evident to you how much our looks depend on our sight. Without the looking-glass there would be fewer "sweet smiles," "speaking faces," "pretty laughs." As the blind boy or girl have no way of telling themselves what combination of muscles best suits their profile and contour, they trust wholly to their nerves to record their feelings—and their nerves cheat them.

We are still struggling to find out the best method of educating ourselves. It is certain that many of the pedagogues who have foisted systems upon us worked with their eyes shut. Perhaps it was our misfortune that they were not wholly blind! To a blind man we may owe our deliverance from the monstrous thing called "primary education." However this be, the blind are not neglecting the blind. A Frenchman, Maurice de la Siseranne, who became blind at the age of nine, has done much to help his fellows. The son of an artist and a man of means, he enjoyed rare advantages, and he has used them well. The greater part of his life has been devoted to a scientific study of the blind and to their improvement. He has enlarged their literature, formed a circulating library for them, and amended the Braille alphabet. Recently we have word of a book in which he is to give his experience and his suggestions. When we are finally educated out of the Zola novel we may read more books that will help ourselves and interest us in the well-being of those less fortunate than we are.

Here we have had so many things to do—building churches, orphan asylums, hospitals, and schools—that some one had to

wait uncomplainingly. Our blind did the waiting. I have called attention to the peculiarities of the blind man's moral nature. For him there is a need of a religious training suited to this nature. What does for us may do for him; but he should have a training better suited to himself. He is entitled to that; we owe it to him or to God. When we have done everything else, some generous men or women will give the money for a Catholic Blind Asylum. Nowadays the blind man who is not a musician or a tuner makes baskets or brooms or ropes, or turns wood. He will do better things if *we* put our wits with his in a serious effort to "help the blind." Our Catholic asylum will be a success from the start. Think of its patron! St. Louis, the first to show loving care for the blind. Of course he was a king; but, then, remember he was a saint, and all the saints are true democrats.

JOHN A. MOONEY.

CHURCH MUSIC AND CECILIAN MUSIC COMPARED.

THE October (1888) CATHOLIC WORLD contains an article from the pen of the Most Reverend F. Janssens, Archbishop of New Orleans, entitled "Church Music: Its Origin and Different Forms." If I venture to make a few remarks on some points of this article, and to speak at some length on the so-called Cecilian music, I am prompted by no other motive than by a high appreciation of genuine ecclesiastical music, and by the fear of misinterpretations which might be, and I may add have been, made to the above article.

After having given a brief sketch of the early history of church music and its most prominent form, the Gregorian chant, the author winds up with the following words:

"Gregorian chant thus belongs to the infant days of musical art; we admire it for its simplicity and a certain solemnity, which the flavor of antiquity has imparted to it. Some of its compositions, especially the Requiem Mass and some of the hymns, many of which date from a far later period than St. Gregory—the thirteenth and fourteenth century—are truly grand, impressive, and majestic; but the greatest portion of the Gregorian chant lacks harmony and melody."

Is it only the "flavor of antiquity" which imparts solemnity to the Gregorian chant? or is it not rather its intrinsic worth and beauty? The learned Dom Pothier says in his book on Gregorian chant: "These melodies are so far beyond comparis-

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